

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/051262

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08F210/06 C08F4/642 C08F4/76 C08F210/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/07681 A (DOW CHEMICAL CO) 14 March 1996 (1996-03-14) page 42; example 32 table 7 claim 5	1,5,9-15
X	----- CAPORASO, LUCIA ET AL: "Enantioselectivity of C8- and C2-Symmetric ansa-Metallocene Catalysts in the Styrene Insertion" MACROMOLECULES (2000), 33(20), 7275-7282, 2000, XP001187513 the whole document ----- -/--	1,5,9-15

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

11 November 2004

Date of mailing of the international search report

23/11/2004

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PCT/EP2004/051262

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KUO, JING-CHUNG ET AL: "Synthesis of syndiotactic polypropylene based diblock copolymer via metallocene catalyst mediated chain transfer reaction" POLYMER PREPRINTS (AMERICAN CHEMICAL SOCIETY, DIVISION OF POLYMER CHEMISTRY) (2003), 44(2), 10-11, 2003, XP008027256 the whole document	1,5,9-15
X	----- DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; ARAI, TOORU ET AL: "Propylene-aromatic vinyl compound copolymers with specific stereoregularity in propylene chain structure, and their efficient preparation" XP002269696 retrieved from STN Database accession no. 126:31838	1,9-15
Y	abstract & JP 08 269134 A (DENKI KAGAKU KOGYO KK, JAPAN) 15 October 1996 (1996-10-15) paragraph '0015! - paragraph '0026!; table 1	2-4,6-8
X	----- DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; MORI, RYOJI ET AL: "Syndiotactic propylene polymers, thermoplastic resin compositions containing them, and molded products therefrom with balanced rigidity, surface hardness, and impact resistance" XP002269697 retrieved from STN Database accession no. 133:267637 abstract & JP 2000 273123 A (MITSUI CHEMICAL INDUSTRY CO., LTD., JAPAN) 3 October 2000 (2000-10-03) page 115 - page 128; claim 4	1,9-15
X	----- DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; MICHKAMI, KENJI ET AL: "Random polymerization of aromatic vinyl monomers and olefins using aluminoxane-free metallocene catalyst systems" XP002269694 retrieved from STN Database accession no. 131:102672 abstract -/--	1,9-15

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/051262

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>& JP 11 199614 A (MITSUI CHEMICALS INC., JAPAN) 27 July 1999 (1999-07-27) paragraph '0030! - paragraph '0049! -----</p> <p>DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; MYATA, HIROSHI ET AL: "Ethylene-.alpha.-olefin-aromatic vinyl compound random copolymers and their manufacture" XP002269698 retrieved from STN Database accession no. 124:118309 abstract & JP 07 278230 A (TOSOH CORP, JAPAN) 24 October 1995 (1995-10-24) -----</p>	1,9-15
X	<p>EP 0 520 732 A (DOW CHEMICAL CO., USA) 30 December 1992 (1992-12-30) page 11 - page 13; examples 59-100; tables III,IV page 14 - page 15; example 103 -----</p>	13-15
Y	<p>WO 00/49029 A (FINA RESEARCH ; RAZAVI ABBAS (BE)) 24 August 2000 (2000-08-24) example 1E page 29 figures 1-12 claim 1 -----</p>	2-4,6-8
A	<p>EP 1 179 553 A (ATOFINA RES) 13 February 2002 (2002-02-13) claim 1; tables 1-4 -----</p>	1-15
A	<p>EP 1 083 188 A (FINA RESEARCH) 14 March 2001 (2001-03-14) claim 1; tables 1,2 -----</p>	1-15
A	<p>RAZAVI, A. ET AL: "Preparation and crystal structures of the complexes (.eta.5-C5H3TMS-CMe2-.eta.5-C13H8)MC12 and '3,6-ditButC13H6-SiMe2- NtBu!MC12 (M=Hf, Zr or Ti): mechanistic aspects of the catalytic formation of a isotactic-syndiotactic stereoblock-type polypropylene" JOURNAL OF ORGANOMETALLIC CHEMISTRY, 621 (1-2), 267-276 CODEN: JORCAI; ISSN: 0022-328X, 2001, XP004231263 cited in the application the whole document -----</p>	1-15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/051262

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9607681	A	14-03-1996	AT 185822 T	15-11-1999
			AU 700074 B2	17-12-1998
			AU 3239095 A	27-03-1996
			BR 9509193 A	21-10-1997
			CA 2198136 A1	14-03-1996
			CN 1362424 A	07-08-2002
			CN 1379050 A	13-11-2002
			CN 1362425 A	07-08-2002
			CN 1159814 A ,B	17-09-1997
			DE 69512926 D1	25-11-1999
			DE 69512926 T2	04-05-2000
			EP 0778852 A1	18-06-1997
			ES 2139926 T3	16-02-2000
			FI 970876 A	03-03-1997
			IL 115112 A	22-12-1999
			JP 10505621 T	02-06-1998
			NO 970942 A	28-04-1997
			RU 2159779 C2	27-11-2000
			WO 9607681 A1	14-03-1996
			US 6111020 A	29-08-2000
			US 5869591 A	09-02-1999
			US 5977271 A	02-11-1999
			ZA 9507323 A	28-02-1997
JP 8269134	A	15-10-1996	JP 3489697 B2	26-01-2004
JP 2000273123	A	03-10-2000	NONE	
JP 11199614	A	27-07-1999	NONE	
JP 7278230	A	24-10-1995	JP 3536341 B2	07-06-2004
EP 0520732	A	30-12-1992	US 5721185 A	24-02-1998
			CA 2072058 A1	25-12-1992
			CN 1068125 A ,B	20-01-1993
			DE 69206497 D1	18-01-1996
			DE 69206497 T2	18-07-1996
			EP 0520732 A1	30-12-1992
			ES 2080447 T3	01-02-1996
			FI 922921 A	25-12-1992
			JP 3339883 B2	28-10-2002
			JP 5194641 A	03-08-1993
			KR 233966 B1	15-12-1999
			MX 9203162 A1	01-02-1993
WO 0049029	A	24-08-2000	WO 0049029 A1	24-08-2000
			AT 271071 T	15-07-2004
			AU 2806200 A	04-09-2000
			AU 3141199 A	04-09-2000
			BR 0008312 A	22-01-2002
			CA 2371835 A1	24-08-2000
			CN 1346373 T	24-04-2002
			DE 60012166 D1	19-08-2004
			WO 0049056 A1	24-08-2000
			EP 1169356 A1	09-01-2002
			JP 2002510358 T	02-04-2002
			US 6515086 B1	04-02-2003

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/051262

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1179553	A	13-02-2002	EP 1179553 A1	13-02-2002
			AU 8400501 A	18-02-2002
			WO 0212358 A1	14-02-2002
			US 2004077805 A1	22-04-2004
EP 1083188	A	14-03-2001	EP 1083188 A1	14-03-2001
			AU 7653400 A	17-04-2001
			WO 0119877 A1	22-03-2001
			EP 1224228 A1	24-07-2002
			US 2004087746 A1	06-05-2004
			US 6630550 B1	07-10-2003